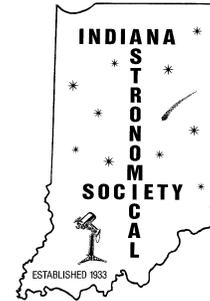


February, 2010  
Volume 77, Issue 2  
www.iasindy.org



# The Bulletin

**The March General Meeting, March 13, 2010 7:00 PM  
Holcomb Observatory**

**Globular Clusters from the Students' Eyepiece**

Meera Chander and Zach Conrad  
Carmel High School

The Department of Astronomy at Indiana University hosted the I-Universe Competition in 2009, where teams of high school students wrote proposals to use the WIYN 0.9-m telescope at Kitt Peak National Observatory in Arizona for one night to make astronomical observations. Meera Chander and Zach Conrad, part of a team of three, won this opportunity, and they chose to image three globular clusters: M56, M71, and M72. Their presentation will include details of the competition, their proposal, the experience, and most importantly, the images resulting from their research and data processing.

In addition, Meera will share highlights from her 2009 summer experience, where she worked as an intern at NASA John H. Glenn Research Center in Cleveland, Ohio.

\*\*\*\*\*

Meera Chander and Zach Conrad, two seniors from Carmel High School, have been members of the IAS since January 2009. They first demonstrated their enthusiasm for astronomy when they approached the CHS Planetarium Director, Mr. Keith Turner, early their freshman year. Since then, Meera and Zach have been extensively involved with the Carmel High School Planetarium by taking Astronomy as a course of study and assisting with all public planetarium shows. In addition, they have taken the opportunity to participate in research projects and learn about Planetarium Productions through university resources.

**Meera Chander** will be majoring in Aerospace Engineering with Information Technology at the Massachusetts Institute of Technology. In addition to being a Planetarium Assistant, Meera is the Co-Team Captain of the CHS TechHOUNDS FIRST Robotics Team and conducts research regarding extrasolar planets at Ball State University. Her favorite subjects include engineering/electronics and physics.

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**Zach Conrad** will be majoring in Theater Production and minoring Education with a Secondary Education License at a local Indiana university. In addition to being a Planetarium Assistant, Zach is involved in Technical Theatre for Carmel High School Performing Arts productions. His favorite subjects include science and information technology, and he enjoys working with telescopes and astrophotography.

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## **IAS Calendar of Events for March**

March 9 – Board Meeting

March 13 – General Meeting at Holcomb Observatory

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## **Bulletin**

As I was writing the Bulletin this month, I began to ponder our delivery system. How many of our members actually go to the website and sit down and read the Bulletin online? I know I have subscriptions to two other publications that I read on line and I find that I personally don't read them as much as I do publications that I actually get in hard copy or can print. So, I was wondering if the membership would be interested in receiving their Bulletin as an email in PDF format so it would not be so large and slow their system to a snail's crawl. I think I could send it as a pdf attachment on the list serve each month and take care of those that get their Bulletin electronically. A copy would still go to the website and those that have chosen to receive their Bulletin by mail would continue to do so.

I would like to receive comments.

Jeff Patterson  
Editor  
KB9SRB@hotmail

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## **ALCor Observations**

By Bill Conner

### **GLOBE at Night 2010 – 3 – 16 March**

Members of the Indiana Astronomical Society are invited to participate in the 5<sup>th</sup> annual global campaign to measure night sky brightness known as "GLOBE at Night." GLOBE at Night provides us with an opportunity to go outside between 8 and 10 PM on a clear, moonless night, and observe the constellation Orion. With the new moon occurring on the 15<sup>th</sup>, the best opportunity will be during the weekend of 12 to 14 March. I'll put a request in to Mother Nature for clear nights during this period.

Participation does not require any special training or instruction. The GLOBE at Night web site provides all the information needed so visit: [.globeatnight.org/](http://.globeatnight.org/) You will find an audio podcast (10 minutes) on light pollution and how to participate in GLOBE at Night as well as a PowerPoint presentation on the subject. In 2009, citizen scientists from 70 countries submitted over 15,000 observations.

To participate, all you have to do is compare your view of the nighttime sky with the 7 Magnitude Charts in the downloadable Family Activity Packet. These charts will help you determine the magnitude of faintest stars that you can see at your location. You are also encouraged to observe from more than one location, for example, your home and a favorite dark site. Submit your report on the GLOBE at Night web site.

## **Activities for March:**

### **Link Observatory**

None Scheduled

### **McCloud Activities–**

None Scheduled –

We are able to go to the Link, Prairie Grass Observatories, and McCloud Nature Park at non scheduled times if they do not conflict with reserved activities:

For those interested in going to The Link Observatories for observing call Gary Schoppenhorst 1 317 297-1405.

For those interested in going to McCloud to observe, please call the park office 765 676 5437 before 4PM on the day you want to go out. They will give you permission to be there at night and make arrangements to cut off the lights.

For those interested in going to Prairie Grass Observatories for observing call Hoppe at 1-765-296-2753.

## **Other Observing Activities**

The Kirkwood Observatory Solar Telescope is open on the "First Saturday" of each month from 1-3 PM. Viewers may even be able to see a solar prominence or two weather permitting. Updated weather conditions and closings will be posted at the Kirkwood Observatory Hotline at (812) 855-7736, and at the Observatory webpage, [://www.astro.indiana.edu/kirkwood.shtml](http://www.astro.indiana.edu/kirkwood.shtml).

Monthly openings of the solar telescope are planned for the first Saturday of each monthly during our 2009 observing season, in celebration of the International Year of Astronomy. And if you want to follow the Sun in between our monthly Solar Telescope openings, the website [.spaceweather.com](http://spaceweather.com) provides daily updates.

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## **Joe Goss Receives Award**

Joe Goss, past president, and current member received his Herschel II Award as listed on page 16 of the March 2010 issue of the *Reflector*. He is the 71<sup>st</sup> to complete this list. Congratulations Joe.

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## **Flipping the Lights on Cosmic Darkness**

Exploring the universe is a bit like groping around a dark room. Aside from the occasional pinprick of starlight, most objects lurk in pitch darkness. But with the recent launch of the largest-ever infrared space telescope, it's like someone walked into the room and flipped on the lights.

Suddenly, those dark spaces between stars don't appear quite so empty. Reflected in the Herschel Space Observatory's 3.5-meter primary mirror, astronomers can now see colder, darker celestial objects than ever before—from the faint outer arms of distant galaxies to the stealthy "dark asteroids" of our own solar system.

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Many celestial objects are too cold to emit visible light, but they do shine at much longer infrared wavelengths. And Herschel can observe much longer infrared wavelengths than any space telescope before (up to 672 microns). Herschel also has 16 times the collecting area, and hence 16 times better resolution, than previous infrared space telescopes. That lets it resolve details with unprecedented clarity. Together, these abilities open a new window onto the universe.

”The sky looks much more crowded when you look in infrared wavelengths,” says George Helou, director of the NASA Herschel Science Center at Caltech. “We can't observe the infrared universe from the ground because our atmosphere blocks infrared light, and emits infrared itself. Once you get above the atmosphere, all of this goes away and suddenly you can look without obstruction.”

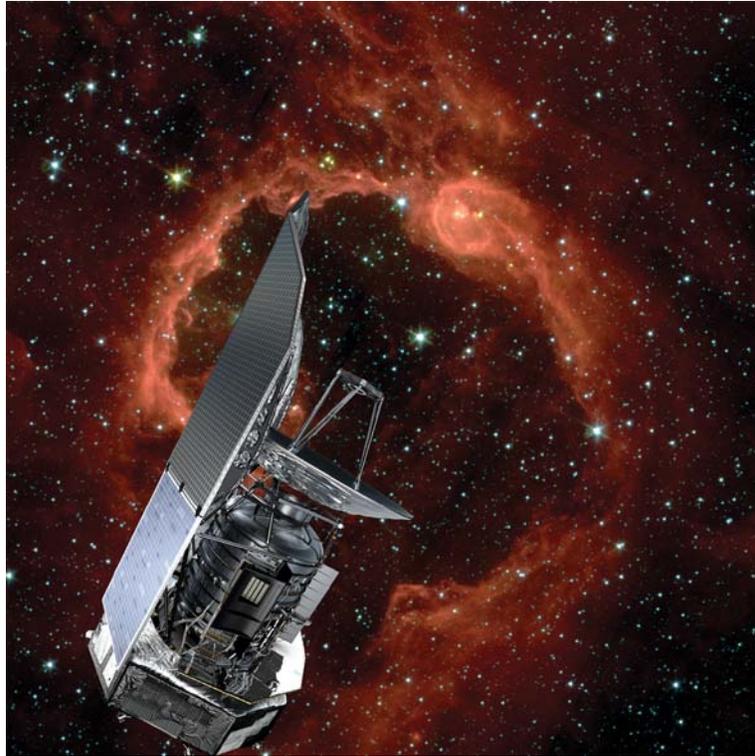
Herschel launched in May from the Guiana Space Centre in French Guiana aboard a European Space Agency Ariane 5 rocket. Since then, it has expanded the number of distant galaxies observed at far infrared wavelengths from a few hundred to more than 28,000. And with the instrument testing and system check-out phases finally completed, the discoveries are only now beginning.

Beyond simply imaging these dark objects, Herschel can identify the presence of chemicals such as carbon monoxide and water based on their spectral fingerprints. “We will be able to decipher the chemistry of what's going on during the beginnings of star formation, in the discs of dust and gas that form planets, and in the lingering aftermath of stellar explosions,” Helou says.

And those are just the expected things. Who knows what *unexpected* discoveries may come from “flipping on the lights?” Helou says “we can't wait to find out.”

Herschel is a European Space Agency mission, with science instruments provided by a consortium of European-led institutes and with important participation by NASA. See the ESA Herschel site at [sci.esa.int/science-e/www/area/index.cfm?fareaid=16](http://sci.esa.int/science-e/www/area/index.cfm?fareaid=16). Also, see the NASA sites at [herschel.jpl.nasa.gov](http://herschel.jpl.nasa.gov), [www.herschel.caltech.edu](http://www.herschel.caltech.edu), and [www.nasa.gov/mission\\_pages/herschel](http://www.nasa.gov/mission_pages/herschel). Kids can learn about infrared light by browsing through the Infrared Photo Album at The Space Place, [spaceplace.nasa.gov/en/kids/sirtf1/sirtf\\_action.shtml](http://spaceplace.nasa.gov/en/kids/sirtf1/sirtf_action.shtml).

*This article was provided courtesy of the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.*



*The Herschel Space Observatory has 3.5-meter primary mirror, allowing astronomers to see colder, darker celestial objects than ever before.*

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## WSP 2010

I have mixed emotions about the party this year. Terry and I headed out ahead of the storm that dumped 14 inches of snow in Indy. We were ecstatic about being ahead of the storm. Then we hit the rain. I would bet there was  $\frac{3}{4}$  inch of water on the roads in Georgia. Cars were hydroplaning everywhere. We finally got out of the storm and went to Orlando. Got up to 60 deg weather. Terry and I then got to Big Pine Key just in time to hear the Colts lose. Bummer. We got up early on Monday morning and went to West Summerland Key to check in for the party. It was sunny and we got our “spot”. Things were going well. Monday night we finally got polar aligned and did some observing before the clouds moved in. Tuesday started out beautiful except for the rain at sundown. I went to bed with the intent of getting a good night’s sleep. About 3 am I woke and looked outside. STARS!! I scrambled and got out the scope and the binoculars. On the beach, I looked due south and there stood Omega Centauri in all its splendor! If you have never seen it, try to get somewhere where you can see it. It makes M-13 look like a pinpoint almost. Anyway the rest of the week was cool and the nights were somewhat cloudy. I think we got 3 good nights of observing. I know I Know!! 60 degrees with what people back home were experiencing does not lend to sympathy!! There were eleven members of the IAS at the party. Several had come down for the shuttle launch and said that it was spectacular. All in all we had a good time. Although it was cool and windy it was a heck of a lot better than in Indy. At first I said I might not come down again but “hmm” I wonder when I will receive the registration packet for next year. Come on October!!



The IAS Crew at the Party (Bill Conner had already left for Naples)



Dan Cade took this picture of the shuttle launch.

Feb 17, 2010

Asteroid Collision is One For The X-Files

By Ray Villard, Space



Is this mystery object a comet or the result of an asteroid collision?

*NASA, ESA, D. Jewitt (UCLA)*

I've seen thousands of astronomical images over my career, but this is one of the few absolute jaw-droppers: A flying X-pattern with trailing streamers.

At first glance it looks like a four-pointed Kohga Ninja throwing star blade.

It's so weird-looking that you want to call the UFO hotline. Maybe it's a "Bird of Prey" starship decloaking as it enters our solar system.

The mystery object, located 100 million miles from Earth, may really be the aftermath of a collision between two asteroids -- like a bullet hitting another bullet. Whatever it is, nothing quite like it has ever before been seen in the heavens.

The comet-like object, called P/2010 A2, was first discovered by the LINEAR (Lincoln Near-Earth Asteroid Research program) sky survey on January 6. Telescopes around the world turned their attention to it.

Comet expert David Jewitt of UCLA quickly applied for special discretionary time on the Hubble Space Telescope to get a close-up look at the object. Hubble pictures take on January 25 and 29 left everyone speechless. It's fun watching the expression on the faces of astronomers when they first see it, like "WTF!?"

I on the strange space visitor in January, and some readers dismissed it as just another one of a handful of hybrid asteroid-comets that was outgassing. But the Hubble view removes any lingering doubt that this is something new in astronomical observations.

The scenario being pondered is that two uncharted asteroids ran into each other at speeds of over 11,000 miles per hour (or five times faster than a rifle bullet). The center of the "X" might be the original collision point where the trajectories of the object intersected. The whole structure has a definite ballistic look to it, like plummeting smoke trails from an exploded aerial firework.

(Government conspiracy buffs might imagine it's the result of an "anti-asteroid" interceptor being dispatched in a secret military experiment.)

This smashup created a shower of debris that is being swept back into a tail from the collision site by the pressure of sunlight. The main nucleus of P/2010 A2, which mysteriously lies outside of its own halo of dust, is the surviving remnant. It looks like the other body presumably disintegrated. There are two predominant streamers of dust in the Hubble image that are telltale evidence for two objects trailing dust.

The asteroid belt contains abundant evidence for ancient collisions that have shattered precursor bodies into fragments. The orbit of P/2010 A2 is itself consistent with membership in the asteroid family, produced by collisional shattering of a pair of wayward asteroids over 100 million years ago. One fragment of that smashup may have struck Earth 65 million years ago, triggering a mass extinction that wiped out the dinosaurs.

With doomsday hysteria building, this might get attention on the Internet as yet another omen of the "End of Times." Those who've overdosed on Nostradamus might see a flying Star of David, or a pentagram.

But asteroid collisions have been ongoing for over 4 billion years. Thanks to our modern telescopes we've finally "caught one in the act."

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## UP Coming Star Parties

**The North Central Region of the Astronomical League (NCRAL)** will hold its annual meeting on April 16-17, 2010 at the Holiday Inn hotel at the Bloomington-Normal, Illinois Airport. The meeting will be hosted by the Twin City Amateur Astronomers. Members of the Indiana Astronomical Society are welcome to attend this adjacent AL Region meeting. We are located in the Great Lakes region.

Online registration and additional information about the conference, including speakers, is available at [://www.ncral2010.org](http://www.ncral2010.org) .

**Mid-South Stargaze** April 14-18 Mississippi The Observatory is one mile southeast of the Natchez Trace Parkway at French Camp. French Camp is about half-way between Jackson and Tupelo, Mississippi, at Natchez Trace mile marker 181.

[://www.rainwaterobservatory.org/stargaze](http://www.rainwaterobservatory.org/stargaze)

**Tennessee Spring Star Party 2010** - Fall Creek Falls State Park April 16-18

[://personal.bna.bellsouth.net/s/p/spsmith/default.htm](http://personal.bna.bellsouth.net/s/p/spsmith/default.htm)

**Indiana Astronomy Day (IAS/PGO)** – April 16-18

[://jmmahony.home.insightbb.com/pgo/schedule.html](http://jmmahony.home.insightbb.com/pgo/schedule.html)

**Texas Star Party** West Texas May 9-16, 2010. This is a premier party with very dark skies and a great site. Just a long way. Online registration will open November 15. [.texasstarparty.org](http://texasstarparty.org)

**Michiana Star Party** Potawatomi Wildlife Park near Tippecanoe Indiana May 14-16, 2010

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Contact Michiana Astronomical Society for information and registration. [.michiana-astro.org](http://michiana-astro.org)

**Apollo Rendezvous** – Dayton, Ohio June 11 - 12  
[://mvas.org](http://mvas.org)

**Two Rivers Spring Star Party** May 13-16  
[.freewebs.com/tworiversstarparty](http://freewebs.com/tworiversstarparty)

**JEPC Star Gazing Event** IL June 10-13  
[://www.mikewolford.com/JEPC%20Event.htm](http://www.mikewolford.com/JEPC%20Event.htm)

**Cherry Springs Star Party** Cherry Springs State Park, PA June 10-13  
[://www.astrohbg.org/cssp/information](http://www.astrohbg.org/cssp/information)

**Nebraska Star Party** – August 8th - 13th, 2010 - North Central Nebraska - This is a premier dark site and has fantastic observing. However, the weather can be brutal. Temperatures can reach 105-110 degrees. However you can cool off in the shade of the tree. All activities will be at the Snake Creek Campground at Merritt Reservoir. [://www.nebraskastarparty.org/](http://www.nebraskastarparty.org/)

**Earth Wind and Sky Star Party** August 5-8  
[.freewebs.com/earthwindsky](http://freewebs.com/earthwindsky)

**Indiana Family Star Party** Camp Cullum, Frankfort, IN August 5-8, 2010  
[://jmmahony.home.insightbb.com/pgo/starparty/](http://jmmahony.home.insightbb.com/pgo/starparty/)

**Astrofest** Kankakee IL Date To be announced  
[.chicagoastro.org](http://chicagoastro.org)

**Black Forest Star Party** PA September 10-12  
[://www.bfsp.org/starparty/](http://www.bfsp.org/starparty/)

**Okie-Tex Star Party** – October 2-10 This is reported as one of the darkest sites in the US. It is a great deep sky event.

**Twin Lakes Star Party** October 2-10 This is a great party very close to home  
[.wkaa.net](http://wkaa.net)

If you know of events coming up let me know and I will get them in the Bulletin

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## **Membership Status**

**The following changes in membership took place in February:**

**Total Membership 143**

**Renewals: 5**

**New student members: 0**

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**New Members: 0**

**Inactive status:**

**Renewed from Inactive status:**

Dean Sylvester – Ellettsville, IN

Dennis Rhyne – Indianapolis

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**IAS LIBRARY:**

The complete list can be found ([://www.iasindy.org/memonly/iasfiles.php](http://www.iasindy.org/memonly/iasfiles.php), which is password protected). We have a new additions for the library. There is now a link on our website page for our new Multi-Media Library. Greg has built this library of a multitude of videos that are on the web. The only problem is that you will have to have high speed internet to observe these video streams. We think it will be a great addition to our library for both novices and experienced observers. Greg has many more sources to go through so the library will continue to grow. If you have comments or questions about the library please contact Greg McCauley at 317 663-3289 or [@ultrasoundconsulting.net](mailto:@ultrasoundconsulting.net) .

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**IU Kirkwood Observatory**

Kirkwood Observatory on the IU campus will be open each Wednesday evening through the fall, weather permitting! Join us for a night of observing the night sky with the Kirkwood 12" refractor. Please visit our schedule at [://www.astro.indiana.edu/kirkwood.shtml](http://www.astro.indiana.edu/kirkwood.shtml), for a list of dates and times. For updated weather conditions and closings, please call the Kirkwood Observatory Hotline at (812) 855-7736.

The IU Astronomy Department has an electronic bulletin to let people know about local astronomy activities and events. If you would like to subscribe, send an email to [@indiana.edu](mailto:@indiana.edu) and we'll put you on the distribution list. Information about activities and events to be included in the e-bulletin should be sent to [@astro.indiana.edu](mailto:@astro.indiana.edu).

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**Easy Listening:**

Weekly pod casts are available at [://www.astronomycast.com/](http://www.astronomycast.com/) for those who love astronomy and want to learn, yet have no time (or desire) to do extra reading. They cover a variety of topics, and feature a different topic each week, so you can choose your flavor. The cast includes Fraser Cain, the publisher of Universe Today ([://www.universetoday.com/](http://www.universetoday.com/)), and Dr. Pamela Gay, an assistant professor of physics at Southern Illinois University Edwardsville. You do not need an iPod or portable device to enjoy these.

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**Mentor Program**

We are reinstating the mentor program, which will provide the new member with lots of information and help them assimilate into the Society. Thad Hatchett has volunteered to lead this program. We need your help. If you are interested in becoming a mentor please contact me at Jeff Patterson [@hotmail.com](mailto:@hotmail.com) or Thad Hatchett at [@comcast.net](mailto:@comcast.net) . We will put your name on the

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list and assign a new person to you. Our goal is to retain people and make this hobby a lot more fun.

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### **Do you have a question or need?**

We are establishing a list of members who would be willing to receive calls for help on specific objects. If you have a specific skill and would be willing to help others please contact Jeff Patterson KB9SRB@hotmail.com.

Based upon the responses we received to your intro question recently, perhaps we should add a section to the bulletin naming those members who would be willing to receive calls for help on specific subjects.

William Conner (wmtconner@att.net) - for CCD imaging and film photography.  
Jeff Patterson ([@Hotmail.com](mailto:@Hotmail.com)) – Observatory design and construction

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### **Public Outreach Programs – If you want to schedule a program at the Link Observatory or at your site, please contact the following people:**

**Gerald Venne is our Public Events Coordinator.** He will be responsible for coordinating Public Events for the IAS. To schedule a public event contact Gerald Venne 1 317 826-2680.

He needs your help. Let Gerald know if you would like to show the public our sky. We need people to help at Link and elsewhere. It is actually a lot of fun.

If you would like to schedule the Link, please contact Gary Schoppenhorst at 1-317-297-1405 or at [@att.net](mailto:@att.net)

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### **Astro Ads**

Are you changing or upgrading your equipment? Do you have or are you looking for astronomical materials and equipment? The Indiana Astronomical Society as a service to its members, will publish non-commercial ads at no charge. The ad will stay in the Bulletin for 4 months and may be renewed at the owner's request.

#### **To place an ad, contact:**

Bulletin Editor  
Jeff Patterson  
1780 S. Morgantown Rd.  
Greenwood, IN 46143  
(317) 300-0449  
E-Mail: [@Hotmail.com](mailto:@Hotmail.com)

#### **For Sale: - Astro-Physics 400 German Equatorial Mount**

**Near new condition. Used less than a dozen times.**

**9 lb. Stainless Steel Counterweight**

**6 lb. Stainless Steel Counterweight**

**Wood AP case**

**AP Encoders and cables**

**NGC-MAX DSC Computer**

**\$1700**

**Contact: Jim Rinehart 317-881-3475**

**For Sale:**

2 eyepieces for sale:  
3mm Televue Radian  
7mm Pentax SMC  
Both for \$300

Jim Zdobylak  
zobel@aol.com  
317-862-4715

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**Onions and Orchids**

A bouquet of orchids for Doug Brown, Betsy Brown, Gerald Venne, Dick Rhodes, and Jeff Laquia for helping provide an astronomy program and telescopes for Brooks Elementary school. Those of you that stayed outside with the telescopes should get a medal of honor as well.

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**Equipment Loaner Program**

The Loan Program has been helpful to those new to the hobby and others in need of observing equipment. We consider offers of equipment you may not have need for any longer.

Did you know you could borrow a scope or piece of astronomy equipment from the Society and take it for a test drive? The Society has a program where members who are trying to determine what kind of equipment to buy can borrow one of the Society's scopes for a month or two and see how they like it. John Molt is the chairman of the program and can arrange for your pickup and training on the use of the particular instrument. This is a great way to see what telescope you want to purchase. We have several scopes, eyepieces and binoculars to loan.

Philip Dempelfeld [\\_dimpelfeld@comcast.net](mailto:dimpelfeld@comcast.net) 812-764-0620

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**Board Meeting – Board Meeting March 9, 2010**

The IAS Board Meeting is being held at 430 Massachusetts Avenue in downtown Indianapolis. The building is at the point of convergence of Mass. Ave., Vermont and Alabama Streets. There is a Starbucks located in the frontage of the building. The coffee shop stays open late into the evening. Try to park as close to Starbucks as possible, preferably in a metered space. On-street parking is free after 5pm. Handicapped parking is directly in front of Starbucks entrance. The entrance to the building is to the left of Starbucks around on the side. We meet in the basement. Ride the elevator (around the corner to your left) to the basement. Turn right as you exit the elevator and go through the first door on your right. This is the conference/meeting room. If you

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need further assistance, please contact Brian P. Murphy on his cell phone 716-8124 or Jeff Patterson 317 506-0325.

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## IAS Calendar Dates 2010

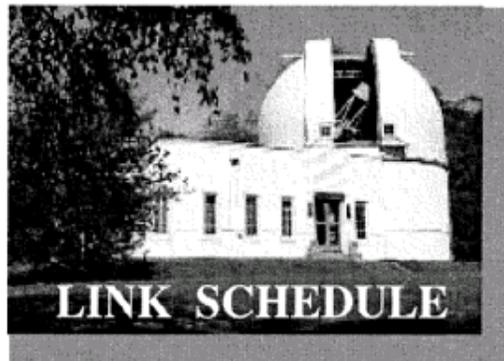
	<b>NAG</b>	<b>General</b>	<b>Board</b>
January		9-Jan	12-Jan
February		6-Feb	2-Feb
March		13-Mar	9-Mar
April	24-Apr	10-Apr	13-Apr
May	22-May	8-May	4-May
June	19-Jun	5-Jun	8-Jun
July	24-Jul	10-Jul	13-Jul
August	21-Aug	14-Aug	17-Aug
September	18-Sep	11-Sep	14-Sep
October		16-Oct	19-Oct
November		13-Nov	16-Nov
December		18-Dec	

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### Goethe Link Observatory Observatory Address

**Goethe Link Observatory  
8403 N. Observatory Lane  
Martinsville, IN 46151**

**Observatory 's Phone:  
(317) 831-0668**



This schedule is being published to assure proper access to the Link Observatory for programs that are designed as observational, general education, astronomy conferences or amateur research projects. Training programs are tentatively scheduled for Saturday evenings only. Although other requests can over-ride these sessions. It is the purpose of this listing to prevent activity conflicts.

If you need to acquire use of the 36-inch telescope: remember two important IAS guidelines: 1) *There has to be two or more IAS members present.....*2) *contact the Observatory Manager: Gary Schoppenhorst (317)297-1405. DON'T WAIT UNTIL THE LAST MINUTE TO MAKE YOUR REQUEST OR YOU MAY NOT GET ACCESS.*

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### Bulletin Stats

#### Accessing the Bulletin

The current bulletin can be found on the website [.iasindy.org](http://iasindy.org)

**Bulletin - Bulletin deadline on the 20th of every month**

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The monthly newsletter welcomes articles of local astronomical interest information and want ads:

Please submit to  
The Indiana Astronomical Society, Inc  
Jeff Patterson, editor  
1780 S. Morgantown Rd  
Greenwood, IN 46143  
Phone: (317) 300-0449  
[@hotmail.com](mailto:ias@iasindy.org)

### **Membership information**

Contact any IAS officer or the Treasurer John Shepherd (317) 862-3442 or Vicki Switzer  
[@verizon.net](mailto:ias@verizon.net) 1 812-835-2251

### **Link Observatory**

Latitude: 39 degrees, 33 minutes north  
Longitude: 86 degrees, 24 minutes west  
Phone: (317) 831-0668  
IAS Internet address  
[://www.iasindy.org](http://www.iasindy.org)

### **Executive Officers**

President: Jeff Patterson (317) 300-0449  
Vice-President and Program Director: Doug Brown (317) 872-4050  
Secretary: Betsy Brown 1-317-872-4050  
Treasurer: John Shepherd (317) 862-3442

### **Board of Directors**

Tom Borlik (2010)	John Molt (2011)
John Switzer (2010)	Bill Conner(2012)
Ron Burgess (2010)	Gerald Venne (2012)
Greg McCauley (2011)	

### **Webmaster**

Gary Schoppenhorst 1 317 297-1405

### **Observatory Manager**

Gary Schoppenhorst 1 317 297-1405

### **Public Event Coordinator**

Gerald Venne [@iquest.net](mailto:ias@iquest.net) 1 317 826-2680

### **Equipment Loan Program Coordinator**

Philip Dempelfeld [\\_dimpelfeld@comcast.net](mailto:dimpelfeld@comcast.net) 812-764=0620

### **Library Committee Coordinator**

Greg McCauley [greg@ultrasoundconsulting.net](mailto:greg@ultrasoundconsulting.net)

### **Astronomical League Coordinator**

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Bill Conner wmtconner@att.net 1-812 828-0449

**Membership Coordinator**

Vicki Switzer @verizon.net 1 812-835-2251

**March Calendar, 2010**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	1	2	3	4	5	6
7 3rd QTR ☾	8	9 Board Meeting	10	11	12	13 General Meeting
14	15 New Moon ●	16	17	18	19	20
21	22	23 1 <sup>st</sup> QTR ☾	24	25	26	27
28	29 Full Moon ○	30	31			

## Membership Application to the IAS

### Benefits:

- Use of the Goethe Link Observatory
- Formal monthly programs with guest speakers
- Local and regional astronomical functions
- Discounted Astronomy publications
- New Moon observing activities
- Access to IAS member experts and problem solving
- The Bulletin monthly newsletter
- Membership in the Astronomical League
- Free admission to the Holcomb planetarium
- Star party events and observing sessions

Please mark whether this is a new or renewal application

New

Renewal

Note: Magazine subscription renewals forms and payment must be submitted to the Treasurer in order to maintain publisher's club discount.

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ ZIP: \_\_\_\_\_

Telephone: ( ) \_\_\_\_\_

E-Mail Address: \_\_\_\_\_

For the “membership only” section you need to provide a user name and a password:

User name: \_\_\_\_\_ Password \_\_\_\_\_

List Server - This service is our main communication tool. The list server is accessible only by IAS members and only for IAS related business. It is controlled very carefully to prevent spam. Unless you opt out for the List server, you will automatically have access to it when you are approved for the “members only” section.

I do **not** want to receive IAS communications via the List Server

The Bulletin – The monthly publication of the Indiana Astronomical Society

How do you want to receive the IAS monthly newsletter?

Downloadable from Website  Hard Copy\*

\* Please note that hard copy costs the Society about \$1.50 per issue. Please consider this when selecting mode of receiving the newsletter.

Annual Regular Membership (\$30.00)	
Annual Student Membership (\$10.00)	
Astronomy Magazine Renewal (\$34.00)	
Sky and Telescope Magazine (\$33.00) (New Subscription)	
Total Enclosed	

Make checks payable to: The Indiana Astronomical Society, Inc

Please complete Member Profile and include with the application

Mail Application to:

Vicki Switzer Membership Coordinator  
2115 N. Private Rd 50 E  
Centerpoint, IN 47840

### Member Profile

Spouse's Name: \_\_\_\_\_

Children's names and ages: \_\_\_\_\_

\_\_\_\_\_  
Note: Profile information is not a requirement for membership to the Society.